Archie Kappel
Aisin Drivetrain, Inc.
1001 Industrial Way
Crothersville, IN 47229

Re: Registered Construction and Operation Status,
071-12840-00030

Dear Mr. Kappel:

The application from Aisin Drivetrain, Inc., received on October 16, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following transmission manufacturing plant, to be located at 1001 Industrial Way, Crothersville, Indiana 47229, is classified as registered:

(1) Thirteen (13) natural gas fired rooftop furnaces, identified as RTF-D1, RTF-D2, RTF-D3, RTF-D4, RTF-D5, RTF-D6, RTF-F1, RTF-F2, RTF-D9, RTF-D10, RTF-D11, RTF-D12 and RTF-D13, each rated at 0.570 MMBtu/hr;

(2) One (1) natural gas fired brazing furnace, identified as ATHT 003, rated at 0.635 MMBtu/hr;

(3) Four (4) cold cleaner degreasing operations, identified as ATCL 004, ATCL 005, ATCL 006 and ATCL 014;

(4) Two (2) conveyorized degreasing operations, identified as ATCL 009 and ATCL 008;

(5) Four (4) metal inert gas welding stations, identified as ATWE 001, ATWE 003, ATWE 011 and ATWE 012, with a maximum hourly consumption of 2.75 pounds of wire per station;

(6) Three (3) process water cooling towers, identified as CT#1, CT#2 and CT#3;

(7) Three (3) water-based alkaline washing stations, washing metal parts, designated as ATCL 001, ATCL 002 and ATCL 003. ATCL 002 and ATCL 003 are connected to filter units;

(8) Four (4) press stations, designated as ATPR 001, ATPR 002, ATPR 003 and ATPR 004;

(9) One (1) flushing machine, designated as ATZM 001;

(10) Two (2) power shift machines (testers), designated as ATTE 001 and ATTE 002;

(11) One (1) air leak tester, designated as ATZM 003;

(12) One (1) paint booth connected to dry filters, method of application is air atomization, touch-up coating transmission parts with low gloss black paint or similar coating. The stack has a height of 33 feet, diameter of 14 inches and a gas flow rate of 2700 actual cubic feet per minute (acfm);

(13) One (1) ATF machine, designated as ATZM 002;

(14) One (1) in-line pneumatic compressed air dryer;

(15) Ten (10) machine centers, designated as ATMM 001, ATMM 002, ATMM 003, ATMM 004, ATMM 005, ATMM 006, ATMM 007, ATMM 008, ATMM 009, and ATMM 010. Machine centers ATMM 001 and ATMM 002 are connected to an oil and dust collector;

(16) One (1) 0.01 MMBtu/hr natural gas rooftop furnace, designated as RTF-B1. The stack has a height of 23 feet and a diameter of 4 inches;

(17) Two (2) 0.1 MMBtu/hr natural gas propeller unit heaters, designated as PUH-B1 and PUH-B2. Each stack has a height of 33 feet and a diameter of 4 inches;

(18) One (1) 0.3 MMBtu/hr natural gas water heater, designated as GWH#1. The stack has a height of 33 feet and a diameter of 5 inches;

(19) One (1) 0.4 MMBtu/hr direct-fired natural gas air make-up unit, designated as DF AMU-A1;

(20) Six (6) 0.8 MMBtu/hr natural gas rooftop furnaces, designated as RTF-A1, RTF-A2, RTF-A3, RTF-A4, RTF-A5, RTF-A6. Each stack has a height of 33 feet and a diameter of 12 inches;

(21) Nine (9) roof top units, identified as C-1 to C-9, natural gas fired with a heat input capacity of 0.57 MMBtu per hour, each;

(22) Six (6) propeller unit heaters, identified as D-1 to D-6, natural gas fired with a heat input capacity of 0.4 MMBtu per hour, each;

(23) One (1) continuous belt brazing furnace, identified as ATHT 002, natural gas fired with a heat input capacity of 0.571 MMBtu/hr, exhausting to a stack BF-1;

(24) Six (6) degreasers for washing, cleaning, and degreasing steel metal parts, identified as ATCL 004 to 009, uses water based alkaline solvent with a consumption of 0.125 gallons per day, each. All of these degreasers are controlled by a mist collector, exhausting in the plant;

(25) One (1) arc spraying machine to spray copper brazing filler metal, identified as ATZM 017 with a maximum capacity of processing sub-assemblies of 476 pounds per hour. Particulate matter emissions are controlled by a dust collector with a gas flow rate of 4500 acfm, filter area of 16.0 ft2, and air to cloth ratio of 0.918, exhausting to a stack WF-1;

(26) Four (4) MIG welders, identified as ATWE 001 to 003 and ATWE 005 with a maximum consumption of wire per station 2.75 and 8.25 pound per hour, respectively, exhausting inside the plant;

(27) Five (5) lathe machines for machining, identified as ATLA 002 to 006, connected to oil and dust collector, exhausting inside the plant, and

(28) Miscellaneous equipment consisting of two (2) air leak testers, identified as ATTE 004 and 005, one (1) helium leak tester, one (1) performance tester, identified as ATTE 008, one (1) run out guage, identified as ATTE 007, two (2) balance checkers, identified as ATBA 001 and 002, one (1) rivet press machine, identified as ATPR 008, one (1) shim selector, identified as ATZM 012, three (3) stamping presses, identified as ATPR 009 to 011, one (1) coil feeder, identified as ATZM 011, one (1) bender for blade ends, identified as ATZM 015, one (1) shim selector, identified as ATZM 012, one (1) oil filler, identified as ATZM 013, one (1) pallet guage, identified as ATZQ 006, and one (1) ID stamp maker, identified as ATZM 014.

The following conditions shall be applicable:

(a) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

(b) 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control)
Pursuant to 071-9321-00030, issued on April 7, 1998, the owner or operator of a cold cleaner degreaser facility identified as ATCL 004 to 007 shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius ($38^{O}C$) (one hundred degrees Fahrenheit ($100^{O}F$));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius ($38^{O}C$) (one hundred degrees Fahrenheit ($100^{O}F$)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius ($38^{O}C$) (one hundred degrees Fahrenheit ($100^{O}F$)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius ($48.9^{O}C$) (one hundred twenty degrees Fahrenheit ($120^{O}F$)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(c) 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control)
Pursuant to 071-9321-00030, issued on April 7, 1998, the owner or operator of a cold cleaning facility identified as ATCL 004 to 007 shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or unit dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

(d) 326 IAC 8-3-7(a) (Conveyorized Degreaser Operation and Control)
Pursuant to 071-9321-00030, issued on April 7, 1998, the owner or operator of a conveyorized degreaser identified as ATCL 008 shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser's entrances and exits with downtime covers which are closed when the degreaser is not operating;

(2) Equip the degreaser with the following switches:

(A) A condenser flow switch and thermostat which shuts off sump heat if condenser coolant stops circulating or becomes too warm.

(B) A spray system switch which shuts off spray pump if the vapor level drops more than ten (10) centimeters (four (4) inches).

(C) A vapor level control thermostat which shuts off sump heat when vapor level rises more than ten (10) centimeters (four (4) inches).

(3) Equip the degreaser with entrances and exits which silhouette workloads in such a manner that the average clearance between the articles and the degreaser opening is either less than ten (10) centimeters (four (4) inches) or less than ten percent (10%) of the width of the opening.

(4) Equip the degreaser with a drying tunnel, rotating or tumbling basket, or other equipment which prevents cleaned articles from carrying out solvent liquid or vapor.

(5) Equip the degreaser with a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(6) Equip the degreaser with one (1) of the following control devices:

(A) A refrigerated chiller.

(B) A carbon adsorption system with ventilation which, with the downtime covers open, achieves a ventilation rate of greater than or equal to fifteen (15) cubic meters per minute per square meter (fifty (50) cubic

feet per minute per square foot) of air to solvent interface area, and an average of less than twenty-five (25) parts per million of solvent is exhausted over one (1) complete adsorption cycle.

(C) Other systems of demonstrated equivalent or better control as those outlined in clause (A) or (B). Such systems shall be submitted to the U.S. EPA as a SIP revision.

(e) 326 IAC 8-3-7(b) (Conveyorized Degreaser Operation and Control)
Pursuant to 071-9321-00030, issued on April 7, 1998, the owner or operator of a conveyorized degreaser identified as ATCL 008 shall ensure that the following operating requirements are met:

(1) Minimize solvent carryout emissions by the following:

(A) Racking articles to allow complete drainage.

(B) Maintaining the vertical conveyor speed at less than three and three-tenths (3.3) meters per minute (eleven (11) feet per minute).

(2) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

(3) Repair solvent leaks immediately or shut down the degreaser if leaks cannot be repaired immediately.

(4) Prohibit the exhaust ventilation rate from exceeding twenty (20) cubic meter per minute per square meter (sixty-five (65) cubic feet per minute per square foot) of degreaser opening unless a greater ventilation rate is necessary to meet Occupational Safety and Health Administration requirments.

(5) Prohibit the use of workplace fans near the degreaser opening.

(6) Prohibit visually detectable water in the solvent exiting the water separator.

(7) Cover entrances and exits at all times except when processing workloads through the degreaser.

(f) 326 IAC 6-3-2 (Particulate Emissions Limitations)

(1) Pursuant to 071-9321-00030, issued on April 7, 1998, the particulate matter emissions from the arc spraying machine for copper brazing filler metal operation is subject to 326 IAC 6-3-2. Pursuant to 326 IAC 6-3-2, the particulate matter emissions from the arc spraying machine for copper brazing filer metal operation shall comply with the following equation.

$E = 4.10P^{0.67}$ where E = rate of emission in pounds per hour,
P = process weight in tons per hour

(2) The particulate matter (PM) from the four (4) metal inert gas welding stations shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

(g) Any change or modification that may increase actual VOC usage at the paint booth to 15 pounds per day or more shall obtain IDEM, OAM approval before such changes can take place.

This registration supersedes any previous air approvals issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Management that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

NH/EVP
cc: File - Jackson County
Jackson County Health Department
Air Compliance - Joe Foyst
Permit Tracking - Janet Mobley
Air Programs Section- Michelle Boner

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

Company Name:	Aisin Drivetrain, Inc.
Address:	1001 Industrial Way, Crothersville, IN 47229
City:	Crothersville
Authorized individual:	Archie Kappel
Phone #:	(812) 793-2427
Registration #:	R071-12840-00030

I hereby certify that Aisin Drivetrain, Inc. is still in operation and is in compliance with the requirements of Registration 071-12840-00030.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: Aisin Drivetrain, Inc.
Source Location: 1001 Industrial Way, Crothersville, IN 47229
County: Jackson
SIC Code: 5013
Operation Permit No.: R071-12840-00030
Permit Reviewer: NH/EVP

The Office of Air Management (OAM) has reviewed an application from Aisin Drivetrain, Inc. relating to the construction and operation of a transmission manufacturing plant.

New Emission Units and Pollution Control Equipment

The application includes information relating to the construction and operation of the following equipment:

(1) Thirteen (13) natural gas fired rooftop furnaces, identified as RTF-D1, RTF-D2, RTF-D3, RTF-D4, RTF-D5, RTF-D6, RTF-F1, RTF-F2, RTF-D9, RTF-D10, RTF-D11, RTF-D12 and RTF-D13, each rated at 0.570 MMBtu/hr;

(2) One (1) natural gas fired brazing furnace, identified as ATHT 003, rated at 0.635 MMBtu/hr;

(3) Four (4) cold cleaner degreasing operations, identified as ATCL 004, ATCL 005, ATCL 006 and ATCL 014;

(4) Two (2) conveyorized degreasing operations, identified as ATCL 009 and ATCL 008;

(5) Four (4) metal inert gas welding stations, identified as ATWE 001, ATWE 003, ATWE 011 and ATWE 012, with a maximum hourly consumption of 2.75 pounds of wire per station; and

(6) Three (3) process water cooling towers, identified as CT#1, CT#2 and CT#3.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(1) Three (3) water-based alkaline washing stations, washing metal parts, designated as ATCL 001, ATCL 002 and ATCL 003. ATCL 002 and ATCL 003 are connected to filter units;

(2) Four (4) press stations, designated as ATPR 001, ATPR 002, ATPR 003 and ATPR 004;

(3) One (1) flushing machine, designated as ATZM 001;

(4) Two (2) power shift machines (testers), designated as ATTE 001 and ATTE 002;

(5) One (1) air leak tester, designated as ATZM 003;

(6) One (1) paint booth connected to dry filters, method of application is air atomization, touch-up coating transmission parts with low gloss black paint or similar coating. The stack has a height of 33 feet, diameter of 14 inches and a gas flow rate of 2700 actual cubic feet per minute (acfm);

(7) One (1) ATF machine, designated as ATZM 002;

(8) One (1) in-line pneumatic compressed air dryer;

(9) Ten (10) machine centers, designated as ATMM 001, ATMM 002, ATMM 003, ATMM 004, ATMM 005, ATMM 006, ATMM 007, ATMM 008, ATMM 009, and ATMM 010. Machine centers ATMM 001 and ATMM 002 are connected to an oil and dust collector;

(10) One (1) 0.01 MMBtu/hr natural gas rooftop furnace, designated as RTF-B1. The stack has a height of 23 feet and a diameter of 4 inches;

(11) Two (2) 0.1 MMBtu/hr natural gas propeller unit heaters, designated as PUH-B1 and PUH-B2. Each stack has a height of 33 feet and a diameter of 4 inches;

(12) One (1) 0.3 MMBtu/hr natural gas water heater, designated as GWH#1. The stack has a height of 33 feet and a diameter of 5 inches;

(13) One (1) 0.4 MMBtu/hr direct-fired natural gas air make-up unit, designated as DF AMU-A1;

(14) Six (6) 0.8 MMBtu/hr natural gas rooftop furnaces, designated as RTF-A1, RTF-A2, RTF-A3, RTF-A4, RTF-A5, RTF-A6. Each stack has a height of 33 feet and a diameter of 12 inches;

(15) Nine (9) roof top units, identified as C-1 to C-9, natural gas fired with a heat input capacity of 0.57 MMBtu per hour, each;

(16) Six (6) propeller unit heaters, identified as D-1 to D-6, natural gas fired with a heat input capacity of 0.4 MMBtu per hour, each;

(17) One (1) continuous belt brazing furnace, identified as ATHT 002, natural gas fired with a heat input capacity of 0.571 MMBtu/hr, exhausting to a stack BF-1;

(18) Six (6) degreasers for washing, cleaning, and degreasing steel metal parts, identified as ATCL 004 to 009, uses water based alkaline solvent with a consumption of 0.125 gallons per day, each. All of these degreasers are controlled by a mist collector, exhausting in the plant;

(19) One (1) arc spraying machine to spray copper brazing filler metal, identified as ATZM 017 with a maximum capacity of processing sub-assemblies of 476 pounds per hour. Particulate matter emissions are controlled by a dust collector with a gas flow rate of 4500 acfm, filter area of 16.0 ft2, and air to cloth ratio of 0.918, exhausting to a stack WF-1;

(20) Four (4) MIG welders, identified as ATWE 001 to 003 and ATWE 005 with a maximum consumption of wire per station 2.75 and 8.25 pound per hour, respectively, exhausting inside the plant;

(21) Five (5) lathe machines for machining, identified as ATLA 002 to 006, connected to oil and dust collector, exhausting inside the plant, and

(22) Miscellaneous equipment consisting of two (2) air leak testers, identified as ATTE 004 and 005, one (1) helium leak tester, one (1) performance tester, identified as ATTE 008, one (1) run out guage, identified as ATTE 007, two (2) balance checkers, identified as ATBA 001 and 002, one (1) rivet press machine, identified as ATPR 008, one (1) shim selector, identified as ATZM 012, three (3) stamping presses, identified as ATPR 009 to 011, one (1) coil feeder, identified as ATZM 011, one (1) bender for blade ends, identified as ATZM 015, one (1) shim selector, identified as ATZM 012, one (1) oil filler, identified as ATZM 013, one (1) pallet guage, identified as ATZQ 006, and one (1) ID stamp maker, identified as ATZM 014.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) Registration 071-5231-00030, issued on March 12, 1996;

(b) Exemption 071-9321-00030, issued on April 7, 1998;

(c) Revised Name Change 071-9834-00030, issued on February 3, 1999; and

(d) Response to Request for Review 071-10278-00030, issued on May 14, 1999.

All conditions from previous approvals were incorporated into this permit.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on October 16, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 8).

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	11.12
PM-10	11.67
SO_2	0.06
VOC	9.83
CO	8.04
NO_x	9.57

HAP's	Potential To Emit (tons/year)
Methyl ethyl ketone	0.09
Toluene	0.22
Xylene	0.03
Glycol ether	0.18
TOTAL	0.51

(a) Potential emissions (as defined in the Indiana Rule) of PM, PM10, VOC, CO and NO are less than 25 tons per year, but greater than 5 tons per year. Therefore, pursuant to 326 IAC 2-5-5, a registration is required.

(b) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Jackson County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Jackson County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Jackson County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit R071-12840-00030, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) The degreasing operation at the source is not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 20, (40 CFR 63.460 through 63.468, Subpart T) because it does not use a halogenated HAP solvent as a cleaning agent. There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Jackson County and the potential to emit all criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to 071-5231-00030, issued on March 12, 1996, volatile organic compounds (VOC) from the paint booth shall be kept below fifteen (15) pounds per day. Therefore, the requirements of 326 IAC 8-2-9 (Miscellaneous metal coatings) will not apply.

326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control)

Pursuant to 071-9321-00030, issued on April 7, 1998, the owner or operator of a cold cleaner degreaser facility identified as ATCL 004 to 007 shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38^{O}C) (one hundred degrees Fahrenheit (100^{O}F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^{O}C) (one hundred degrees Fahrenheit (100^{O}F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^{O}C) (one hundred degrees Fahrenheit (100^{O}F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^{O}C) (one hundred twenty degrees Fahrenheit (120^{O}F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control)

Pursuant to 071-9321-00030, issued on April 7, 1998, the owner or operator of a cold cleaning facility identified as ATCL 004 to 007 shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or unit dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

326 IAC 8-3-7(a) (Conveyorized Degreaser Operation and Control)

Pursuant to 071-9321-00030, issued on April 7, 1998, the owner or operator of a conveyorized degreaser identified as ATCL 008 shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser's entrances and exits with downtime covers which are closed when the degreaser is not operating;

(2) Equip the degreaser with the following switches:

(A) A condenser flow switch and thermostat which shuts off sump heat if condenser coolant stops circulating or becomes too warm.

(B) A spray system switch which shuts off spray pump if the vapor level drops more than ten (10) centimeters (four (4) inches).

(C) A vapor level control thermostat which shuts off sump heat when vapor level rises more than ten (10) centimeters (four (4) inches).

(3) Equip the degreaser with entrances and exits which silhouette workloads in such a manner that the average clearance between the articles and the degreaser opening is either less than ten (10) centimeters (four (4) inches) or less than ten percent (10%) of the width of the opening.

(4) Equip the degreaser with a drying tunnel, rotating or tumbling basket, or other equipment which prevents cleaned articles from carrying out solvent liquid or vapor.

(5) Equip the degreaser with a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(6) Equip the degreaser with one (1) of the following control devices:

(A) A refrigerated chiller.

(B) A carbon adsorption system with ventilation which, with the downtime covers open, achieves a ventilation rate of greater than or equal to fifteen (15) cubic meters per minute per square meter (fifty (50) cubic feet per minute per square foot) of air to solvent interface area, and an average of less than twenty-five (25) parts per million of solvent is exhausted over one (1) complete adsorption cycle.

(C) Other systems of demonstrated equivalent or better control as those outlined in clause (A) or (B). Such systems shall be submitted to the U.S. EPA as a SIP revision.

326 IAC 8-3-7(b) (Conveyorized Degreaser Operation and Control)

Pursuant to 071-9321-00030, issued on April 7, 1998, the owner or operator of a conveyorized degreaser identified as ATCL 008 shall ensure that the following operating requirements are met:

(1) Minimize solvent carryout emissions by the following:

(A) Racking articles to allow complete drainage.

(B) Maintaining the vertical conveyor speed at less than three and three-tenths (3.3) meters per minute (eleven (11) feet per minute).

(2) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

(3) Repair solvent leaks immediately or shut down the degreaser if leaks cannot be repaired immediately.

(4) Prohibit the exhaust ventilation rate from exceeding twenty (20) cubic meter per minute per square meter (sixty-five (65) cubic feet per minute per square foot) of degreaser opening unless a greater ventilation rate is necessary to meet Occupational Safety and Health Administration requirments.

(5) Prohibit the use of workplace fans near the degreaser opening.

(6) Prohibit visually detectable water in the solvent exiting the water separator.

(7) Cover entrances and exits at all times except when processing workloads through the degreaser.

326 IAC 6-3-2 (Particulate Emissions Limitations)

(a) Pursuant to 071-9321-00030, issued on April 7, 1998, the particulate matter emissions from the arc spraying machine for copper brazing filler metal operation is subject to 326 IAC 6-3-2. Pursuant to 326 IAC 6-3-2, the particulate matter emissions from the arc spraying machine for copper brazing filer metal operation shall comply with the following equation.

$E = 4.10P^{0.67}$ where E = rate of emission in pounds per hour,
P = process weight in tons per hour

(b) The particulate matter (PM) from the four (4) metal inert gas welding stations shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

(a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.

(b) See attached calculations for detailed air toxic calculations (Appendix A, page 6).

Conclusion

The construction and operation of this transmission manufacturing plant shall be subject to the conditions of the attached proposed **Registration 071-12840-00030.**

Appendix A: Emission Calculations

Company Name: Aisin Drivetrain, Inc.
Address City IN Zip: 1001 Industrial Way, Crothersville, IN 47229
CP: 071-12840
Plt ID: 071-00030
Reviewer: NH/EVP

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity					
Pollutant	Natural Gas Combustion	Welding	Degreasing Operation	Surface Coating	Machining Operations	**TOTAL**
PM	0.18	0.66	0.00	0.71	9.57	11.12
PM10	0.73	0.66	0.00	0.71	9.57	11.67
SO2	0.06	0.00	0.00	0.00	0.00	0.06
NOx	9.57	0.00	0.00	0.00	0.00	9.57
VOC	0.53	0.00	0.32	8.98	0.00	9.83
CO	8.04	0.00	0.00	0.00	0.00	8.04
total HAPs	0.00	0.06	0.00	0.51	0.00	0.57
worst case single HAP	0.00	0.06	0.00	0.22	0.00	0.22

Total emissions based on rated capacity at 8,760 hours/year.

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity					
Pollutant	Natural Gas Combustion	Welding	Degreasing Operation	Surface Coating	Machining Operations	**TOTAL**
PM	0.18	0.66	0.00	0.71	9.57	11.12
PM10	0.73	0.66	0.00	0.71	9.57	11.67
SO2	0.06	0.00	0.00	0.00	0.00	0.06
NOx	9.57	0.00	0.00	0.00	0.00	9.57
VOC	0.53	0.00	0.32	8.98	0.00	9.83
CO	8.04	0.00	0.00	0.00	0.00	8.04
total HAPs	0.00	0.06	0.00	0.51	0.00	0.57
worst case single HAP	0.00	0.06	0.00	0.22	0.00	0.22

Total emissions based on rated capacity at 8,760 hours/year, after control.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Nai Aisin Drivetrain, Inc.
Address City 1001 Industrial Way, Crothersville, IN 47229
Registration: 071-12840
Plt ID: 071-00030
Reviewer: NH/EVP

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
21.856	191.5

Facilities	MMBtu/hr
Water Heater (GWH#1)	0.3
Air Make-Up Unit DF AMU	0.4
Rooftop Furnace (RTF-B1)	0.01
Rooftop Furnace (RTF-A1)	0.8
Rooftop Furnace (RTF-A2)	0.8
Rooftop Furnace (RTF-A3)	0.8
Rooftop Furnace (RTF-A4)	0.8
Rooftop Furnace (RTF-A5)	0.8
Rooftop Furnace (RTF-A6)	0.8
Propeller Unit Heater (PUH	0.1
Propeller Unit Heater (PUH	0.1
Brazing Furnace (ATHT 00	0.571
Six unit heaters (D-1 to D-6	2.4
Nine rooftop units (C-1 to C	5.13
Rooftop Furnace (RTF-D1)	0.57
Rooftop Furnace (RTF-D2)	0.57
Rooftop Furnace (RTF-D3)	0.57
Rooftop Furnace (RTF-D4)	0.57
Rooftop Furnace (RTF-D5)	0.57
Rooftop Furnace (RTF-D6)	0.57
Rooftop Furnace (RTF-F1)	0.57
Rooftop Furnace (RTF-F2)	0.57
Rooftop Furnace (RTF-D9)	0.57
Rooftop Furnace (RTF-D10	0.57

Rooftop Furnace (RTF-D11	0.57
Rooftop Furnace (RTF-D12	0.57
Rooftop Furnace (RTF-D13	0.57
Brazing Furnace (ATHT003	0.635
Total	**21.856**

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.18	0.73	0.06	9.57	0.53	8.04

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

PM10 when using the
above emission factors to
confirm that the correct

Appendix A: Emissions Calculations
VOC
From Degreasing Operation

Company Nai Aisin Drivetrain, Inc.
Address City 1001 Industrial Way, Crothersville, IN 47229
Registration: 071-12840
Plt ID: 071-00030
Reviewer: NH/EVP

Process	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
ATCL 004	0.991	100.00%	0.0%	100.0%	0.0%	0.00%	0.12500	0.042	0.99	0.99	0.01	0.12	0.02	0.00	ERR	0%
ATCL 005	0.991	100.00%	0.0%	100.0%	0.0%	0.00%	0.12500	0.042	0.99	0.99	0.01	0.12	0.02	0.00	ERR	0%
ATCL 006	0.991	100.00%	0.0%	100.0%	0.0%	0.00%	0.12500	0.042	0.99	0.99	0.01	0.12	0.02	0.00	ERR	0%
ATCL 007	0.991	100.00%	0.0%	100.0%	0.0%	0.00%	0.12500	0.042	0.99	0.99	0.01	0.12	0.02	0.00	ERR	0%
ATCL 008	0.991	100.00%	0.0%	100.0%	0.0%	0.00%	0.12500	0.042	0.99	0.99	0.01	0.12	0.02	0.00	ERR	0%
ATCL 009	0.991	100.00%	0.0%	100.0%	0.0%	0.00%	0.12500	0.042	0.99	0.99	0.01	0.12	0.02	0.00	ERR	0%
ATCL 004	0.991	100.00%	0.0%	100.0%	0.0%	0.00%	0.12500	0.042	0.99	0.99	0.01	0.12	0.02	0.00	ERR	0%
ATCL 005	0.991	100.00%	0.0%	100.0%	0.0%	0.00%	0.12500	0.042	0.99	0.99	0.01	0.12	0.02	0.00	ERR	0%
ATCL 006	0.991	100.00%	0.0%	100.0%	0.0%	0.00%	0.12500	0.042	0.99	0.99	0.01	0.12	0.02	0.00	ERR	0%
ATCL 014	0.991	100.00%	0.0%	100.0%	0.0%	0.00%	0.12500	0.042	0.99	0.99	0.01	0.12	0.02	0.00	ERR	0%
ATCL 009	0.991	100.00%	0.0%	100.0%	0.0%	0.00%	0.25000	0.042	0.99	0.99	0.01	0.25	0.05	0.00	ERR	0%
ATCL 008	0.991	100.00%	0.0%	100.0%	0.0%	0.00%	0.25000	0.042	0.99	0.99	0.01	0.25	0.05	0.00	ERR	0%

State Potential Emissions **Add worst case coating to all solvents** **0.07** **1.74** **0.32** **0.00**

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Na Aisin Drivetrain, Inc.
Address City 1001 Industrial Way, Crothersville, IN 47229
Registration: 071-12840
Plt ID: 071-00030
Reviewer: NH/EVP

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Low Gloss Black	9.5	86.30%	0.0%	86.3%	0.0%	83.80%	0.25000	1.000	8.20	8.20	2.05	49.19	8.98	0.71	9.78	50%

State Potential Emissions **Add worst case coating to all solvents** **2.05** **49.19** **8.98** **0.71**

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Company N Aisin Drivetrain, Inc.
Address Cit 1001 Industrial Way, Crothersville, IN
Registratio 071-12840
Plt ID: 071-00030
Reviewer: NH/EVP

Hazardous Air Pollutants

Pollutant	lbs/hr	lbs/day	tons/yr
Methyl ethyl ketone (2-Buta	0.02	0.48	0.09
Toluene	0.05	1.20	0.22
Xylenes (isomers and mixtu	0.006	0.14	0.03
Glycol Ethers	0.04	0.96	0.18
Total	**0.116**	**2.78**	**0.51**

47229

Company N Aisin Drivetrain, Inc.
Address Cit 1001 Industrial Way, Crothersville, IN
Registratio 071-12840
Plt ID: 071-00030
Reviewer: NH/EVP

PM Calculations from Machining of Metal

Cast Iron raw material rate	1104	lbs/hr	Oil Mist and Dust Collector with an efficiency of 95%
Cast Iron recycle rate (approximately)	128	lbs/hr	
Production Rate	976	lbs/hr	
PM generation rate	0.01	lbs/hr	

PM generation before controls	**0.01**	**lbs/hr**	**PM emissions after controls**	**0.0005**	**lbs/hr**
	0.24	**lbs/day**		**0.012**	**lbs/day**
	0.04	**ton/yr**		**0.00219**	**ton/yr**

Allowable E = 4.10 * P^.67

E = emissions in lbs/hr
P = process weight in tons/hr =

	1104	lbs/hr
	0.552	tons/hr
E =	**2.75**	**lbs/hr**
	66.08	**lbs/day**
	12.06	**tons/yr**

Particulate (PM) emissions before controls is considerably less than the allowable emissions.
PM emissions after controls is negligible. Therefore, the applicant will be in compliance with 326 IAC 6-3.

47229

Company N
Address Cit
Registratio
Plt ID:
Reviewer:

Machining process operations:

Potential PM/PM10 emissions from machining of metal

There will be potential PM emissions from metal machining on lathe machines (identified
by mist collectors having 99.97 % control efficiency.

The dry dust collected = 0.05 tons/yr (data given in the application, based on 4,0

Potential PM/PM10 emissions = Dust collected (tons/yr) / Control Efficiency
= 0.5 tons/yr / 0.997
= 0.5015

Potential PM/PM10 emissions after control
Dust out = Potential emissions (tons/yr) * (1 - control efficiency)
= 0.5015 tons/yr x (1-0.997)
= 0.5015 tons/yr x 0.003
= 0.0015 tons/yr
= 0.0082 lb/day
= 0.0003 lb/hr

Allowable PM/PM10 emissions:

The particulate matter emissions from the machining operation is calculated using the equ

E= 4.10 x P^0.67
where E = rate of emission in pounds per hour
P = process weight in tons per hour
P = 572 lb/hr
P = 0.286 tons/yr

E = 1.77 lb/hr
7.76 tons/yr

Since the potential PM/PM10 emissions after controls are less than the allowable emissio
compliance with the rule 326 IAC 6-3-2

Potential PM/PM10 emissions from arc spraying copper brazing filler metal:

There will be potential PM emissions from arc spraying copper brazing filler metal (identifi
The PM/PM10 emissions are controlled by a dust collector of 99.97% efficiency.

The dry dust collected = 9.0 tons/yr (data given in the application, based on 4,000 actual l

Potential PM/PM10 emissions = Dust collected (tons/yr) / Control Efficiency

=	9.0	tons/yr /	0.997
=	9.027	tons/yr	

Potential PM/PM10 emissions after control

Dust out = Potential PM/PM10 emissions = Potential PM emissions (tons/yr) x (1-control e

=	9.027	tons/yr x	(1-0.997)
=	9.027	tons/yr x	0.003
=	0.027	tons/yr	
=	0.148	lb/day	
=	0.006	lb/hr	

Allowable PM/PM10 emissions:

The particulate matter emissions from the arc spraying of copper brazing filler metal opera

$$E = 4.10 \times P^{0.67}$$

where E = rate of emission in pounds per hour

P = process weight in tons per hour

P =	476	lb/hr
P =	0.238	tons/yr

E =	1.57	lb/hr
	6.86	tons/yr

Since the potential PM/PM10 emissions after controls are less than the allowable emissio
operation will be in compliance with the rule 326 IAC 6-3-2

Appendix A: Emissions Calculations

Aisin Drivetrain, Inc.
1001 Industrial Way, Crothersville, IN 47229
071-12840
071-00030
NH/EVP

as ATLA 002, 003, 004, 005, 006 and 007). These are controlled

00 actual hrs. of operation)

ɹation listed in 326 IAC 6-3-2

ns, the machining process operation will be in

ed as ATZM 017).

hrs. of operation)

efficiency)

ation is calculated using the equation listed in 326 IAC 6-3-2

ns, the arc spraying of copper brazing filler metal